

SAFETY ACCESSORIES

EXTRACTION / FILTER / POLLUTION CONTROL // **TECHNOLOGY**

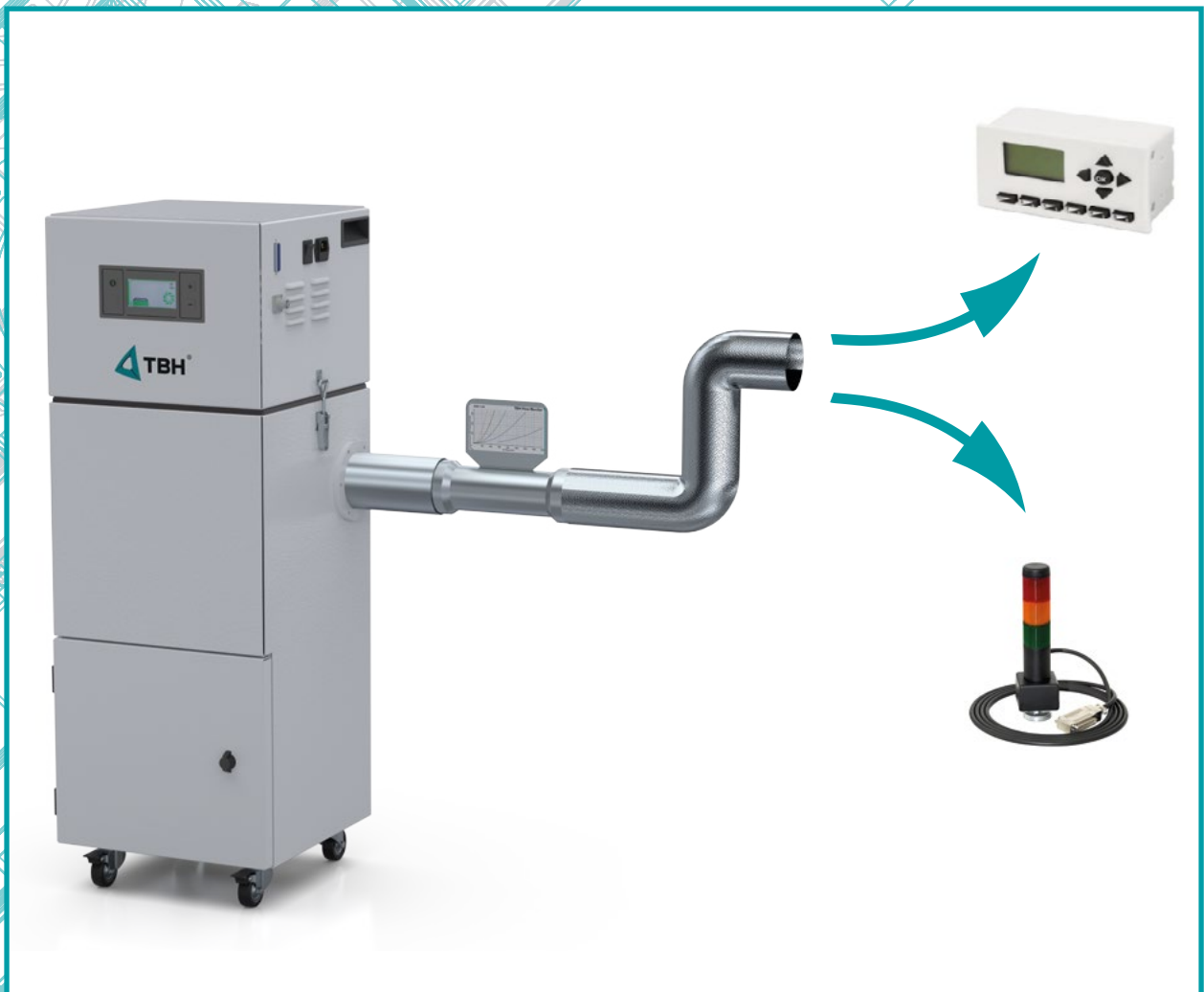


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1. Safety accessories



1.1 Volume flow rate monitoring:

Volume flow monitoring is useful for ensuring the extraction performance when extracting and filtering substances that are particularly hazardous to health. In addition to the differential pressure measurement of the filter and extraction system, the volume flow monitoring ensures that the capture elements are correctly connected and the intake line is intact.

The output is either sent directly to the customer's control system or as an optical and acoustic signal to the optional signal module.

Volume flow monitoring is a fixed requirement in accordance with DIN EN ISO 15012-4 for extracting carcinogenic substances, which are produced, for example, during welding high-alloy steels.



Fig. 1: Volume flow monitoring

Volume flow rate monitoring

Ød ₁ (mm)	ART. NO.
80	16642
100	16643
125	16644
160	16762
200	16661

Installation note: A pipe length of min. 3x pipe diameter must be planned before and after the volume flow monitoring to ensure correct functioning (no air turbulence affecting the measurement result).

Electrical connection: M12 Murr plug (5-pin, male)



Fig. 2: Application example of volume flow monitoring

1.2 Spark extinguisher



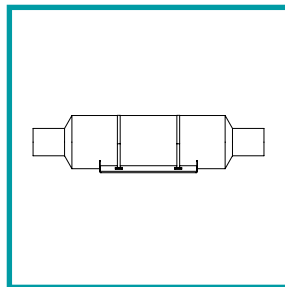
For applications with flying sparks, an additional spark extinguisher is advisable. In order to effectively protect the TBH filter and extraction system from sparks and the associated fire hazard, an ATEX spark extinguisher should be used. The functioning of the spark extinguisher is based on the centrifugal principle. In this process, the gas/air flow is set in rotation, which retains the sparks in the spark extinguisher until they are extinguished.

- 100 % spark extinguishing
- 100 % maintenance-free (for dry dusts).
- Tested design (ATEX approval in accordance with EN 1834).
- Stainless steel housing

The spark extinguisher can be installed in three different ways:

- Use in the pipeline:
 - with a wall bracket (included in the scope of delivery)
 - with pipe clamps (not included in the scope of delivery)
- Installation on the system's cover
- Installation on the system's cover combined with an extraction arm.

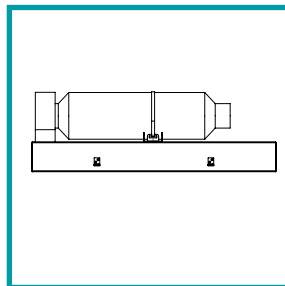
Due to the possible fire hazard in the hose system, it is recommended to install the spark extinguisher as close as possible to the capture point.



Spark extinguisher (use in pipeline)

DIMENSIONS	AIR VOLUME	ART. NO.
d=63mm	150 - 300m³/h	16649
d=80mm	300 - 600m³/h	16766
d=125mm	600 - 1000m³/h	16695

Mounting: Depending on the application and size, spark extinguishers can be mounted on the wall or on a workbench with a special bracket (included in delivery) or with pipe clamps (must be ordered separately).



Spark extinguisher (use in the pipeline)

DIMENSIONS	AIR VOLUME	ART. NO.
300x300 d=63mm	150 - 300m³/h	16647
300x600 d=63mm	150 - 600m³/h	16648



III. similar

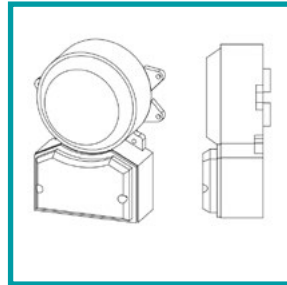
1.3 Filter breakage monitoring



Filter breakage monitoring is used to protect the user being close to a filter and extraction system and to increase system safety in processes with flying sparks. It monitors the filter and extraction system for mechanical or thermal damage to the installed filters. The output is sent directly to the customer's control system or optionally via an op-

tical and acoustic signal from the optionally selectable signal module to the immediate surroundings.

The filter breakage monitoring should be installed as close as possible to the blow-out area of the filter and extraction system.



Filter monitoring

Ød ₁ (mm)	ART. NO.
100	16651
160	16652
250	16653

Installation note:

A pipe length of min. 3x pipe diameter must be planned before and after filter break monitoring to ensure correct functioning (no air turbulence affecting the measurement result). Electrical connection: M12 Murr plug (5-pin, male)



Figure 3: Set-up/application example

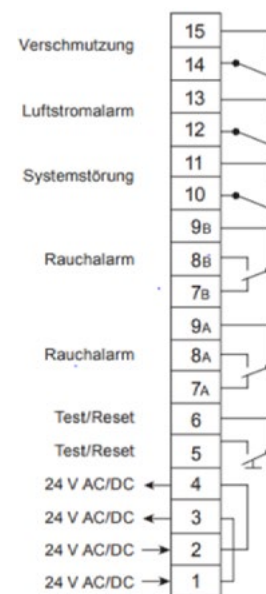


Figure 4: PIN assignment

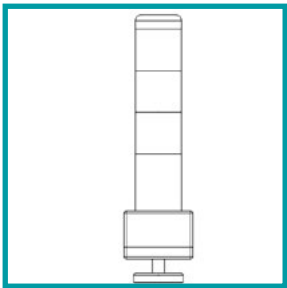
1.4 Signal module



The signal module is suitable for all TBH filter and extraction systems with INSPIRE electronics (excluding the BF series). By means of a magnetic base, the signal module can be mounted in a clearly visible position on or next to the filter and extraction system. It can be attached to all magnetic surfaces. The connection cable has a length of 5 meters.

Indicator lights for:

- Green: Run operation
- Yellow: Filter full 75%
- Red: Collective error (filter full 100%, tem. - motor error)
- Alarm for audible error messages
- Connection to Sub-D25 interface
- Interface extraction system - voltage remains (Excl. +/- 24 V voltage supply)



Signal module

USE	ART. NO.
LN/GL Series, FP Series, TFS Series, OEN-Series	16621
FPV 202	16673
Signal module with sensor input TFS Series with "W3**"	16767

*Systems with IFA approval in accordance with DIN EN ISO 15012-1 (2013) - welding fume separation class "W3" - signal module is necessary for proper operation.

Additional connection of 1 sensor of TBH safety accessories possible.
(Input: M12 Murr plug, 5-pin, female)

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Further information

